

U.S. Patent Application Serial No. **10/516,941**
Response filed May 4, 2010
Reply to OA dated March 15, 2010

AMENDMENTS TO THE CLAIMS:

Please cancel claims 9 and 13-15 without prejudice or disclaimer, amend claims 10-12, as follows. This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Previously presented): A canister for preventing vehicle fuel vaporization, comprising:

a case containing a latent-heat storage type adsorbent composition,

the latent-heat storage type adsorbent composition comprising an adsorbent and a heat-storage material;

the adsorbent being in the form of granules or powder having pores, and being capable of adsorbing vehicle fuel vapor,

the heat-storage material comprising a microencapsulated phase-change material, the phase-change material absorbing or releasing latent heat in response to temperature change, wherein

the average particle diameter of the heat-storage material is about 1/1000 to about 1/10 of that of the adsorbent,

the average particle diameter of the adsorbent is about 1 μm to about 10 mm,

the average particle diameter of the heat-storage material is about 0.1 to about 500 μm ,

the specific surface area of the adsorbent is about 500 to about 2500 m^2/g ,

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the diameter of the pores of the adsorbent is about 10 Å to about 50 Å, and
the content of the heat-storage material is about 10 to about 100 parts by weight based on 100 parts by weight of the adsorbent,
wherein the heat-storage material is adhered to and/or deposited on the surface of the adsorbent.

Claim 2 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 1, wherein the adsorbent is activated carbon, activated alumina or a mixture thereof.

Claims 3-6 (Canceled).

Claim 7 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 1, wherein the latent-heat storage type adsorbent composition is in a form of a molded article comprising the composition and a binder.

Claim 8 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 7, wherein the molded article is in at least one shape selected from the group consisting of pellet, disc and block.

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Claim 9 (Canceled).

Claim 10 (Currently amended): ~~A method for producing a latent-heat storage type adsorbent composition for canisters~~ The canister for preventing vehicle fuel vaporization according to Claim 1, wherein the heat-storage material is electrostatically adhered to and/or deposited on the surface of the adsorbent.

Claim 11 (Currently amended): ~~A method for producing a latent-heat storage type adsorbent composition for canisters~~ The canister for preventing vehicle fuel vaporization according to Claim 1, wherein the heat-storage material ~~and the~~ is adhered to and/or deposited on the surface of the adsorbent ~~[[are]]~~ by uniformly mixed mixing the heat-storage material with the adsorbent.

Claim 12 (Currently amended): ~~A method for producing a latent-heat storage type adsorbent composition for canisters~~ The canister for preventing vehicle fuel vaporization according to Claim 1, wherein the heat-storage material is adhered to and/or deposited on the surface of the adsorbent by obtaining a slurry ~~obtained~~ by suspending the heat-storage material in a liquid medium ~~is mixed and mixing~~ with the adsorbent, and the mixture is then dried then drying the slurry.

Claims 13-15 (Canceled).

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Claim 16 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 1, wherein the latent-heat storage type adsorbent composition for canisters is obtained by a method comprising:

suspending the heat-storage material in a liquid medium to give a slurry, and
spraying a liquid mixture containing the slurry and, if necessary, a binder, on the surface of the vehicle fuel vapor adsorbent.

Claim 17 (Canceled).

Claim 18 (Previously presented): A canister for preventing vehicle fuel vaporization according to Claim 1, wherein the latent-heat storage type adsorbent composition for canisters is obtained by a method comprising:

molding a heat-storage material to produce a molded article, and
uniformly mixing the adsorbent and the molded article.

Claim 19 (Previously presented): A canister for preventing vehicle fuel vaporization according to claim 1, wherein the latent-heat storage type adsorbent composition for canisters is obtained by a method comprising:

uniformly mixing a vehicle fuel vapor adsorbent, the heat storage material, the heat storage material being a powder or a slurry suspending the powdery heat storage material in the liquid medium, a binder and water, and

molding the resultant mixture to form a desired shape.

Claim 20 (Previously presented): A canister for preventing vehicle fuel vaporization, comprising:

a case containing a latent-heat storage type adsorbent composition,

the latent-heat storage adsorbent composition comprising an adsorbent and a heat-storage material;

the adsorbent being in the form of granules, powder or pellets having pores, and being capable of adsorbing vehicle fuel vapor,

the heat-storage material comprising a microencapsulated phase-change material, the phase-change material absorbing or releasing latent heat in response to temperature change, wherein

the average particle diameter of the heat-storage material is about 1/1000 to about 1/10 of that of the adsorbent,

the average particle diameter of the adsorbent is about 1 μm to about 10 mm,

the average particle diameter of the heat-storage material is about 0.1 to about 500 μm ,

the specific surface area of the adsorbent is about 500 to about 2500 m^2/g ,

the diameter of the pores of the adsorbent is about 10 \AA to about 50 \AA , and

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the content of the heat-storage material is about 10 to about 100 parts by weight based on 100 parts by weight of the adsorbent,

wherein the latent-heat storage type adsorbent composition for canisters is obtained by a method comprising:

molding a heat-storage material to produce a molded article, and
uniformly mixing the adsorbent and the molded article.

Claim 21 (Previously presented): A canister for preventing vehicle fuel vaporization according to claim 20, wherein the adsorbent is activated carbon, activated alumina or a mixture thereof.

Claim 22 (Previously presented): A canister for preventing vehicle fuel vaporization according to claim 20, wherein the latent-heat storage type adsorbent composition is in the form of a molded article comprising the composition and a binder.

Claim 23 (Previously presented): A canister for preventing vehicle fuel vaporization according to claim 20, wherein the molded article is in at least one shape selected from the group consisting of pellet, disc and block.